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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

AFSHAR, KAMRAN

ART UNIT PAPER NUMBER

2681

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DATE MAILED: 04/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,180

Applicant(s)

WALSH ET AL.

Examiner

Kamran Afshar, 703-305-7373

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/9/01.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-49 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Omum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-65 of copending Application No. 2003/0032391 A1. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both basically claim the same subject matter which includes: 1) terminals operating in satellite communications system, 2) storing / stored packets, 3) plurality of queues, 4) bandwidth allocations, 5) the plurality of queues are exceeded, 6) weighting scheme, 7) user services, 8) logic configured, 9) computer-readable medium carrying one or more sequences of one or more instructions for managing a plurality of queues of a terminal operating in satellite communications system, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, 10) one or more processors, etc.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-50 of copending Application No. 2003/0035385 A1.

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Although the conflicting claims are not identical, they are not patentably distinct from each other because they both basically claim the same subject matter which includes: 1) terminals operating in satellite communications system, 2) storing / stored packets, 3) plurality of queues, 4) bandwidth allocations, 5) the plurality of queues are exceeded, 6) weighting scheme, 7) user services, 8) logic configured, 9), constant rate, 10) traffic, 11) bandwidth-on-demand control logic, 12) computer-readable medium carrying one or more sequences of one or more instructions for managing a plurality of queues of a terminal operating in satellite communications system, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, etc.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 1-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-50 of copending Application No. 2003/0031141 A1. Although the conflicting claims are not identical, they are not patentably distinct from each other because they both basically claim the same subject matter which includes: 1) terminals operating in satellite communications system, 2) storing / stored packets, 3) plurality of queues, 4) bandwidth allocations, 5) the plurality of queues are exceeded, 6) weighting scheme, 7) user services, 8) logic configured, 9), constant rate, 10) traffic, 11) bandwidth-on-demand control logic, 12) computer-readable medium carrying one or more sequences of one or more instructions for managing a plurality of queues of a terminal operating in satellite communications system, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, etc.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-49 are rejected under 35 U.S.C. 102(e) as being anticipated by Schweinhart (US Pub No.: US 20030032391 A1).

With Respect to claim 1, Schweinhart discloses a method of managing a plurality of queues of a terminal operating in satellite communications system (See i.e. Paragraph [0033]), the method comprising: storing packets in the plurality of queues; and dynamically changing a depth of one of the plurality of queues according to a prescribed scheme, the prescribed scheme specifying a new depth of the one queue based upon past bandwidth allocations associated with the one queue (See i.e. Paragraphs [0083]-[0086], Figs. 1-10 & entire document).

Regarding claims 2, 11, 22, 33, 42, Schweinhart discloses examining traffic statistics associated with the one queue for a pre-determined period (See i.e. Paragraphs [0083]-[0086], Figs. 1-10 & entire document).

Regarding claims 3, 12, 23, 34, 43, Schweinhart discloses the one queue in the changing step uses an entire channel rate, the prescribed scheme permitting the new depth to equal a total memory size (See i.e. Paragraphs [0083]-[0086], Figs. 1-10 & entire document).

Regarding claims 4, 13, 24, 35, 44, Schweinhart discloses the plurality of queues in the storing step is sharing a channel rate, the prescribed scheme specifying the new depth based upon successful transfer of packets stored within the one queue (See i.e. Paragraphs [0083]-[0086], Figs. 1-10 & entire document).

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Regarding claims 5, 14, 25, 36, 45, Schweinhart discloses the changing means / the queue control logic and / or designating a minimum queue depth for each of the plurality of queues (See i.e. Paragraphs [0083]-[0086], Figs. 1-10 & entire document).

Regarding claim 6, 15, 26, 37, 46, Schweinhart discloses means / a queue drop control logic coupled to the plurality of queues and configured to and / or dropping subsequent packets entering the one queue if the new depth of the queue is exceeded (See i.e. Paragraphs [0083]-[0086], Figs. 1-10 & entire document).

Regarding claims 7, 16, 27, 38, 47, Schweinhart discloses the plurality of queues in the storing step is weighted according to user services (See i.e. Paragraphs [0091]-[0093], Figs. 1-10 & entire document).

Regarding claims 8, 17, 28, 39, 48, Schweinhart discloses the plurality of queues in the storing step corresponds to user services that include constant rate service and burst service (See i.e. Paragraph [0074], Figs. 1-10 & entire document).

Regarding claim 9, 29, 40, 49 Schweinhart discloses the plurality of queues in the storing step is logical queues (See i.e. Paragraph [0074], Figs. 1-10 & entire document).

With Respect to claims 10, 32, Schweinhart discloses a terminal apparatus for transmitting packets to a satellite communications system (See i.e. Paragraph [0019]), comprising: a queue control logic configured to dynamically change depths of the plurality of queues according to a prescribed scheme, wherein the prescribed scheme specifies new depths of the plurality of queues based upon past bandwidth allocations associated with the respective plurality of queues (See i.e. Paragraphs [0083]-[0086], Figs. 1-10 & entire document).

Regarding claims 19, 30, Schweinhart discloses a bandwidth-on-demand control logic configured to forward bandwidth-on-demand request packets to the plurality of queues (See i.e. Paragraph [0073], Figs. 1-10 & entire document).

Regarding claims 20, 31, Schweinhart discloses a queue servicing logic configured to forward the packets stored in the plurality of queues to an uplink channel of the satellite communications system (See i.e. Paragraphs [0072], Figs. 1-10 & entire document).

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With Respect to claim 21, Schweinhart discloses a satellite communications system comprising: a hub configured to control bandwidth allocations in conjunction with a satellite (See i.e. Paragraph [0018]); and a plurality of terminals configured to issue bandwidth allocation requests to the satellite, each of the terminals comprising, a plurality of queues configured to store the packets, and a queue control logic configured to dynamically change depths of the plurality of queues according to a prescribed scheme, wherein the prescribed scheme specifies new depths of the plurality of queues based upon past bandwidth allocations associated with the respective plurality of queues (See i.e. Paragraphs [0083]-[0086], Figs. 1-10 & entire document).

With Respect to claim 41, Schweinhart discloses a computer-readable medium carrying one or more sequences of one or more instructions for managing a plurality of queues of a terminal operating in satellite communications system, the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform (See i.e. Paragraph [0020]) the steps of: storing packets in the plurality of queues; and dynamically changing a depth of one of the plurality of queues according to a prescribed scheme (See i.e. Paragraphs [0083]-[0086]), the prescribed scheme specifying a new depth of the one queue based upon past bandwidth allocations associated with the one queue (See i.e. Paragraphs [0167]-[0174], Figs. 1-10 & entire document).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Onodera (U.S. Patent 6,442,146) in view of Dreszer (U.S. Patent 6,442,661 B1).

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With Respect to claim 1, Onodera discloses a terminal operating in satellite communications system (See i.e. all element shown in Fig. 1, Co. 3, Lines 18-45). However, Onodera is silent that the method comprising: storing packets in the plurality of queues; and dynamically changing a depth of one of the plurality of queues according to a prescribed scheme. In the same field of endeavor, Dreszer teaches the method comprising: storing packets in the plurality of queues; and dynamically changing a depth of one of the plurality of queues according to a prescribed scheme (See i.e. Flow diagram of Fig. 9, Co. 10, Lines 1-35). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Dreszer to Onodera to facilitate the prescribed scheme specifying a new depth of the one queue based upon past bandwidth allocations (i.e. transmission slot, channel, time slot) associated with the one queue and / or a method of managing a plurality of queues of a terminal operating in satellite communications system as suggested by Dreszer (See i.e. Co. 16, Lines 44-65).

9. Claims 10, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson (U.S. Pub. No.: 2002/0104920) in view of Willmann (U.S. Patent 5,521,923).

With Respect to claims 10, 32, Thompson discloses a terminal apparatus for transmitting packets to a satellite communications system (See i.e. Abstract, Fig. 1, Paragraph [0018]). However, Thompson did not teach queue control logic configured to dynamically change depths of the plurality of queues according to a prescribed scheme. In the same field of endeavor, Willmann teaches queue control logic configured to dynamically change depths of the plurality of queues according to a prescribed scheme (See i.e. Co. 2, Lines 22-63). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Willmann to Thompson facilitate the prescribed scheme specifies new depths of the plurality of queues based upon past bandwidth allocations (i.e. transmission slot, channel, time slot) associated with the respective plurality of queues.

10. Claims 1-2, 10-11, 21-22, 32-33, 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh (U.S. Pub No.: 2002/01144313) in view of Boulandet (U.S. Patent 6,684,273 B2).

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With Respect to claims 1, 10, 21, 32 Walsh discloses a method of managing a plurality of queues of a terminal operating in satellite communications system, plurality of queues according to a prescribed scheme, storing packets in the plurality of queues (See i.e. Paragraph [0019]), a hub (See i.e. 111 of Fig. 1, 109 of Fig. 2, Paragraph [0033]) configured to control bandwidth allocations in conjunction with a satellite (See i.e. 101); and a plurality of terminals configured to issue bandwidth allocation requests to the satellite (See i.e. 103, 105, 107 of Fig. 2, Paragraph [0034]), each of the terminals comprising, means for and / or a plurality of queues configured to store the packets. However, Walsh did not explicitly teach a queue control logic (See i.e. Co. 4, Lines 40-53) configured / dynamically changing a depth of one of the plurality of queues. In the same field of endeavor, Boulandet explicitly teaches dynamically changing a depth of one of the plurality of queues according to a prescribed scheme (See i.e. Co. 2, Lines 42-67). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Boulandet to Walsh facilitating the prescribed scheme specifying a new depth of the one queue based upon past bandwidth allocations (i.e. transmission slot, channel, time slot) associated with the one queue and / or the respective plurality of queues.

Regarding claims 2, 11, 22, 33, 42, Walsh discloses examining traffic statistics associated with the one queue for a pre-determined period (See i.e. Paragraph [0019]).

With Respect to claim 41, Walsh discloses a computer-readable medium carrying one or more sequences of one or more instructions for managing a plurality of queues (See i.e. Paragraphs, [0021], [0087]) of a terminal operating in satellite communications system (See i.e. Paragraph [0019]), the one or more sequences of one or more instructions including instructions which, when executed by one or more processors, cause the one or more processors to perform the steps of: storing packets in the plurality of queues (See i.e. [0088]-[0089]). However, Walsh did not explicitly teach dynamically changing a depth of one of the plurality of queues according to a prescribed scheme. In the same field of endeavor, Boulandet explicitly teaches dynamically changing a depth of one of the plurality of queues according to a prescribed scheme (See i.e. Co. 2, Lines 42-67). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to provide above teaching of Boulandet to Walsh facilitating the prescribed

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scheme specifying a new depth of the one queue based upon past bandwidth allocations (i.e. transmission slot, channel, time slot) associated with the one queue.

Conclusion


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Bong Hoe Kim (U.S. Pub. No.: 2004/0029573 A1), Discloses Method and Apparatus for Increasing Receiver Immunity to Interference.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (703) 305-7373. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, Gary, Erika A. can be reached @ (703) 308-0123. The fax number for the organization where this application or proceeding is assigned is (703) 872-9306 for all communications.


Kamran Afshar


ERIKA GARY
PATENT EXAMINER